Description of How the Replacement Sheets Differ From the Corresponding Replaced Sheets

Amended Sheets pages 29 - 37 contained Amended claims 1 -42 ("Amended claims").

Replacement Sheets pages 38 - 49 contain Twice Amended claims 1 - 54 ("Twice Amended Claims").

Amended claims 1 - 3 are amended to become Twice Amended claims 1 - 3 as follows, wherein bracketed text is deleted and underlined text is added:

1. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, each flange having an inner periphery and an outer periphery, the joint having a plurality of fasteners disposed around said flanges, comprising:

a first strip of sealing material formed in a substantially continuous loop having a predetermined shape, said strip having an inner periphery and an outer periphery, at least one of said inner and outer peripheries being substantially congruent with one of the peripheries of at least one flange; and

at least one alignment spoke of said sealing material attached to said first strip so as to extend outwardly therefrom, said alignment spoke having [an alignment edge] a concavity for placement adjacent a fastener.

2. The gasket of claim 1, wherein said [alignment edge is curved] alignment spoke includes at least one centering shelf for centering the gasket, said centering shelf being substantially congruent with said one of the peripheries of at least one flange.

3. [The gasket of claim 1] A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, each flange having an inner periphery and an outer periphery, the joint having a plurality of fasteners disposed around said flanges,

comprising:

a first strip of sealing material formed in a substantially continuous loop having a predetermined shape, said strip having an inner periphery and an outer periphery, at least one of said inner and outer peripheries being substantially congruent with one of the peripheries of at least one flange; and

at least one alignment spoke of said sealing material attached to said first strip so as to extend outwardly therefrom, wherein said alignment spoke includes a [curved] radially elongate aperture formed therein for receiving the fastener in a plurality of dispositions relative to the flanges.

Amended claim 4 is canceled.

Twice Amended claims 4-41 correspond to Amended claims 5-42, respectively.

Amended claim 22 is amended to become Twice Amended claim 21 as follows, wherein bracketed text is deleted and underlined text is added:

21. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, each flange having an inner periphery and an outer periphery, the joint having a plurality of fasteners disposed around the flanges, comprising:

at least one strip of sealing material formed in a substantially continuous loop having a predetermined shape, each of said strips having an inner periphery and an outer periphery, at least one of said inner and outer peripheries being substantially congruent with one of the peripheries of at least one flange, wherein said first strip is resilient so as to compress when the flanges are drawn together; and

at least one notch formed in the outer periphery of at least one strip of sealing material adapted for receiving [so as to receive] a thickness gauge, for measuring a change in the thickness of said strip of sealing material when the flanges are drawn together and said sealing material compresses.

a2

Amended claim 27 is amended to become Twice Amended claim 26 as follows, wherein bracketed text is deleted and underlined text is added:

a1. a3 27
5/14/99

~~26~~. The gasket of claim 25, wherein there are a plurality of said notches, and said spokes extend between said strips at the locations of said notches.

Twice Amended claims 42 - 54 are added as follows:

42. The gasket of claim 3, wherein said spoke includes at least one centering shelf for centering the gasket, said centering shelf being substantially congruent with said one of the peripheries of at least one flange.

a3

43. The gasket of claim 3, wherein said spoke includes a tab portion extending beyond the outer peripheries of the flanges.

a4

44. The gasket of claim 43, wherein said tab portion includes identification data disposed thereon.

45. The gasket of claim 3, wherein said sealing material is resilient and has a hardness less than the hardness of at least one of said flanges so that said sealing material compresses when the flanges are drawn together and expands to maintain a seal when the space between the flanges increases.

46. The gasket of claim 46, wherein said sealing material is resilient and has a hardness characterized by a durometer less than 95 Shore A.

47. The gasket of claim 45, wherein said sealing material has a durometer of about 55-70 Shore A.

48. The gasket of claim 3, wherein said first strip and said spoke comprise a single, substantially flat, chemically inert and compressible piece of sealing material.

49. The gasket of claim 3, wherein said first strip includes at least one notch in said outer periphery thereof.

50. The gasket of claim 8, wherein said first strip and spoke comprise a single, substantially flat, chemically inert and compressible piece of sealing material.

51. The gasket of claim 21, wherein said strip of sealing material has a substantially uniform width, wherein said notch forms a re-entrant portion of said strip and wherein the width of said strip is substantially maintained along said notch.

52. The gasket of claim 21, wherein said notch is spaced substantially equidistantly from an adjacent pair of the fasteners.

53. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, each flange having an inner periphery and an outer periphery, the joint having a plurality of fasteners disposed around said flanges, comprising:

a first strip of sealing material formed in a substantially continuous loop having a predetermined shape, said strip having an inner periphery and an outer periphery, said inner periphery of said first strip being substantially congruent with one of the peripheries of at least one flange, wherein said outer periphery of said first strip is partially rectilinear.

54. The gasket of claim 53, further comprising at least one spoke of said sealing material attached to said first strip so as to extend outwardly therefrom, said spoke having a

Duplicates - cancelled RP

AMENDED CLAIMS

1. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, each flange having an inner periphery and an outer periphery, the joint having a plurality of fasteners disposed around said flanges, comprising:

a first strip of sealing material formed in a substantially continuous loop having a predetermined shape, said strip having an inner periphery and an outer periphery, at least one of said inner and outer peripheries being substantially congruent with one of the peripheries of at least one flange; and

at least one alignment spoke of said sealing material attached to said first strip so as to extend outwardly therefrom, said alignment spoke having a concavity for placement adjacent a fastener.

2. The gasket of claim 1, wherein said alignment spoke includes at least one centering shelf for centering the gasket, said centering shelf being substantially congruent with said one of the peripheries of at least one flange.

3. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, each flange having an inner periphery and an outer periphery, the joint having a plurality of fasteners disposed around said flanges, comprising:

a first strip of sealing material formed in a substantially continuous loop having a predetermined shape, said strip having an inner periphery and an outer

periphery, at least one of said inner and outer peripheries being substantially congruent with one of the peripheries of at least one flange; and

at least one alignment spoke of said sealing material attached to said first strip so as to extend outwardly therefrom, wherein said alignment spoke includes a radially elongate aperture formed therein for receiving the fastener in a plurality of dispositions relative to the flanges.

4. The gasket of claim 1, wherein said spoke includes a tab portion extending beyond the outer peripheries of the flanges.

5. The gasket of claim 4, wherein said tab portion includes identification data disposed thereon.

6. The gasket of claim 1, wherein said first strip includes at least one notch in said outer periphery thereof.

7. The gasket of claim 1, wherein said outer periphery of said first strip is partially rectilinear.

8. The gasket of claim 7, wherein said spoke is defined by said sealing material disposed at the intersection between two linear portions of said partially rectilinear periphery.

9. The gasket of claim 1, wherein said sealing material is resilient and has a hardness less than the hardness of at least one of said flanges so that said sealing material compresses when the flanges are drawn together and expands to maintain a seal when the space between the flanges increases.

10. The gasket of claim 1, wherein said sealing material compresses in the direction of applied compressive force when the flanges are drawn together without substantial expansion lateral thereto.

11. The gasket of claim 1, wherein said sealing material is resilient and has a hardness characterized by a durometer less than 95 measured by a Shore A scale ranging from zero to one hundred.

12. The gasket of claim 11, wherein said sealing material has a durometer of about 55-70.

13. The gasket of claim 1, wherein said first strip and said spoke comprise a single, substantially flat piece of sealing material.

14. The gasket of claim 1, wherein said first strip and said spoke are made of a substantially flat, chemically inert and compressible sealing material.

15. The gasket of claim 14, wherein said sealing material is polytetrafluorethylene (PTFE).

16. The gasket of claim 14, wherein said sealing material is fluoroelastomer (FFM).

17. The gasket of claim 14, wherein said sealing material is ethylene proplyene rubber (EPR).

18. The gasket of claim 14, wherein said sealing material is polyvinylidene fluoride (PVDF).

19. The gasket of claim 1, wherein said sealing material is neoprene (CR).

20. The gasket of claim 1, wherein said first strip and said spoke have a substantially uniform thickness between the inner periphery of the flanges and outer periphery of the flanges.

21. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, each flange having an inner periphery and an outer periphery, the joint having a plurality of fasteners disposed around the flanges, comprising:

at least one strip of sealing material formed in a substantially continuous loop having a predetermined shape, each of said strips having an inner periphery and an outer periphery, at least one of said inner and outer peripheries being substantially congruent with one of the peripheries of at least one flange, wherein said first strip is resilient so as to compress when the flanges are drawn together; and

at least one notch formed in the outer periphery of at least one strip of sealing material adapted for receiving a thickness gauge, for measuring a change in the thickness of said strip of sealing material when the flanges are drawn together and said sealing material compresses.

22. The gasket of claim 21, wherein there are a plurality of strips of sealing material, at least two of said strips being substantially concentric.

23. The gasket of claim 21, wherein said outer periphery having said notch is partially rectilinear.

24. The gasket of claim 21, comprising a first strip of sealing material having said inner periphery substantially congruent with the inner periphery of at least one flange, and a second strip of sealing material having an outer periphery with each said notch formed therein,

and a plurality of spokes of sealing material, each of said spokes disposed between and attached to said first strip and said second strip.

25. The gasket of claim 24, further comprising, between said first strip of sealing material, said second strip of sealing material and two or more of said spokes, sealing material significantly thinner than that which forms said first strip, said second strip and said spokes.

26. The gasket of claim 24, wherein there are a plurality of said notches, and said spokes extend between said strips at the locations of said notches.

27. The gasket of claim 24, wherein the inner periphery of said second strip includes a convexity opposite the location of each said notch.

28. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, each flange having an inner periphery of known size and an outer periphery of known size and shape, and a plurality of fasteners disposed around said flanges, comprising:

(a) a first strip of sealing material formed in a substantially continuous loop having a predetermines shape, said strip having an outer periphery whose size is greater than the size of the inner periphery of a least one flange;

(b) a second strip of sealing material formed in a substantially continuous loop having a predetermined shape, said second strip having an inner periphery whose size is greater than the size of said outer periphery of said first strip and less than the size of the outer periphery of at least one flange; and

(c) a plurality of spokes of sealing material, each disposed between and attached to saidfirst strip and said second strip, and extending between said first strip and said second strip, said sealing material being resilient and the hardness of said

sealing material being less than the hardness of a least one of the flanges so that said sealing material compresses when the flanges are drawn together and expands to maintain as seal when the space between the flanges increases.

29. The gasket of claim 28, further comprising, between said first strip of sealing material, said second strip of sealing material and two or more of said spokes, sealing material significantly thinner than that which forms said first strip, said second strip and said spokes.

30. The gasket of claim 28, further comprising a tab extending beyond said outer peripheries of the flanges.

31. The gasket of claim 28, further comprising a third strip of sealing material formed in a substantially continuous loop having a predetermined shape, said third stripe being disposed between said first strip and said second strip and having an inner periphery whose size is greater than the size of said outer periphery of said first strip and an outer periphery whose size is less than the size of said inner periphery of said second strip, said outer periphery of said second strip being substantially congruent with the outer periphery of a first flange and said outer periphery of said third strip being substantially congruent with the outre periphery of a second flange.

32. The gasket of claim 28 wherein said sealing material has the property that it compresses in the direction of applied compressive force without substantial expansion lateral thereto.

33. The gasket of claim 28 wherein said sealing material has a durometer less than 95 a as measured by a durometer having a Shore A scale ranging from zero to one hundred.

34. An assembly, comprising:

(a) a first flange having an inner periphery and an outer periphery;

(b) a second flange, having an inner periphery and an outer periphery, disposed substantially adjacent and parallel to said first flange, thereby defining a joint between said first flange and said second flange;

(c) a first strip of sealing material formed in a substantially continuous loop having a predetermined shape, said strip having an outer periphery whose size is greater than the size of said inner periphery of at least one of said flanges and being disposed between said first flange and said second flange;

35. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, each flange having an inner periphery and an outer periphery, the joint having a plurality of fasteners disposed around said flanges, comprising:

a first strip of sealing material formed in a substantially-continuous loop having a predetermined shape said first strip having an outer periphery whose size is greater tthanthe size of the inner periphery of at least one flange;

a second strip of sealing material formed in a substantially-continuous loop having a predetermined shape said second strip having an inner periphery whose size is greater than said outer periphery of said first strip and less then the outer periphery of said flanges; and

intermediate sealing material disposed between said first strip and said second strip, said intermediate sealing material being ssignificantlythinner than said first strip and said second strip.

36. The gasket of claim 35, further comprising at least one spoke of sealing material extending between and attached to said first strip and said second strip, said first strip, second strip and spokes being of substantially uniform thickness

37. The gasket of claim 35, further comprising a plurality of spokes of sealing material, each extending between and attached to said first strip and said second strip, said first strip, second strip and spokes being of substantially uniform thickness.

38. The gasket of claim 37, wherein said first strip, said second strip and said spokes have substantially uniform thickness from a boundary inside said outer periphery of said first strip to a boundary outside said inner periphery of said second strip.

39. A method for assembling a pair of pipe flanges, comprising the steps of:

(a) placing the flanges adjacent one another in substantially parallel relation;

(b) placing between the flanges a gasket, said gasket having:

(i) a first strip of sealing material formed in a substantially continuous loop having a predetermined shape, said strip having an outer periphery whose size is greater than the size of the inner periphery of at least one of the flanges;

(ii) a second strip of sealing material formed in a substantially continuous loop having a predetermined shape, said strip having an inner periphery whose size is greater than the size of said outer periphery of said first strip and less than the size of the outer periphery of at least one of the flanges; and

(iii) a plurality of spokes of sealing material, each disposed between and attached to said first strip and said second strip, and extending between said first strip and said second strip;

(c) placing a plurality of fasteners around the flanges; and

(d) forcibly drawing the flanges together, said sealing material being resilient and the hardness of said sealing material being less than the hardness of at least one of the flanges so that said sealing material compresses when the flanges are drawn together and expands to maintain a seal when the space between the flanges increases.

40. The method of claim 39 further comprising the step of selecting sealing material having the property that it compresses in the direction of applied compressive force without substantial expansion lateral thereto.

41. The method of claim 39 further comprising the step of selecting sealing material having a durometer less than 95 as measured by a durometer having a Shore A scale ranging from zero to one hundred.

42. The gasket of claim 3, wherein said spoke includes at least one centering shelf for centering the gasket, said centering shelf being substantially congruent with said one of the peripheries of at least one flange.

43. The gasket of claim 3, wherein said spoke includes a tab portion extending beyond the outer peripheries of the flanges.

44. The gasket of claim 43, wherein said tab portion includes identification data disposed thereon.

45. The gasket of claim 3, wherein said sealing material is resilient and has a hardness less than the hardness of at least one of said flanges so that said sealing material compresses when the flanges are drawn together and expands to maintain a seal when the space between the flanges increases.

46. The gasket of claim 45, wherein said sealing material is resilient and has a hardness characterized by a durometer less than 95 Shore A.

47. The gasket of claim 45, wherein said sealing material has a durometer of about 55-70 Shore A.

48. The gasket of claim 3, wherein said first strip and said spoke comprise a single, substantially flat, chemically inert and compressible piece of sealing material.

49. The gasket of claim 3, wherein said first strip includes at least one notch in said outer periphery thereof.

50. The gasket of claim 8, wherein said first strip and spoke comprise a single, substantially flat, chemically inert and compressible piece of sealing material.

51. The gasket of claim 21, wherein said strip of sealing material has a substantially uniform width, wherein said notch forms a re-entrant portion of said strip and wherein the width of said strip is substantially maintained along said notch.

52. The gasket of claim 21, wherein said notch is spaced substantially equidistantly from an adjacent pair of the fasteners.

53. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, each flange having an inner periphery and an outer periphery, the joint having a plurality of fasteners disposed around said flanges, comprising:

a first strip of sealing material formed in a substantially continuous loop having a predetermined shape, said strip having an inner periphery and an outer periphery, said inner periphery of said first strip being substantially

congruent with one of the peripheries of at least one flange, wherein said outer periphery of said first strip is partially rectilinear.

54. The gasket of claim 53, further comprising at least one spoke of said sealing material attached to said first strip so as to extend outwardly therefrom, said spoke having a concavity for placement adjacent a fastener, wherein said spoke is defined by said sealing material disposed at the intersection between two linear portions of said partially rectilinear periphery.